Economics of Riparian Grazing Management

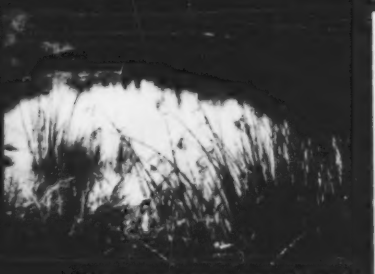

Photo credit: Cari-Lynn Epp

Riparian areas are closely linked to the economics of cattle production.

RIPARIAN Areas FACT sheet

Cattle grazing in riparian areas in Saskatchewan

There are over 80,000 kilometers of stream course in Saskatchewan. Many pastures are situated along these streams. A survey in 1996 showed that cattle grazing occurs along 42% (about 34,000 kilometers) of these creeks and rivers in Saskatchewan. Cattle also graze many acres of wetlands in the pothole areas of the province. Riparian areas along these streams and wetlands are as important to cattlemen today for forage and water as they have been in the past.

What is riparian grazing management?

The goal of riparian grazing management is to maintain or improve the health of riparian areas. This involves many of the same techniques used in good grass/pasture [illegible] (when grazing occurs) and frequency (how often grazing occurs) are what grass managers try to control. Riparian areas are a resilient grazing resource but just like upland pasture they must be utilized at an appropriate level and given periods to recover. Riparian grazing management is ultimately about paying special attention to these sensitive areas in the day to day management of the entire cattle operation.

Riparian areas occupy a small number of acres in pastures but are an important forage resource. Economists from the University of Alberta simulated the improvements in forage production on a hypothetical ranch in the foothills of Alberta. They found that if the riparian area constituted at least 7.5% of the pasture area, investment in infrastructure to improve riparian management could [illegible] profitable.

Case Study: In 2002, the Meacham Hills Forage Club started an environmental stewardship program. Sixteen producers had riparian and pasture assessments conducted to determine the state of their grazing resources. The survey of over 6000 acres found that wetlands potentially contributed as much as 20% of the grazing in their area but only occupied 10% of the pasture acres. These are important areas worth paying attention to! Members of the forage club are now using these assessments to monitor their pastures and maintain the health of this important grazing resource.

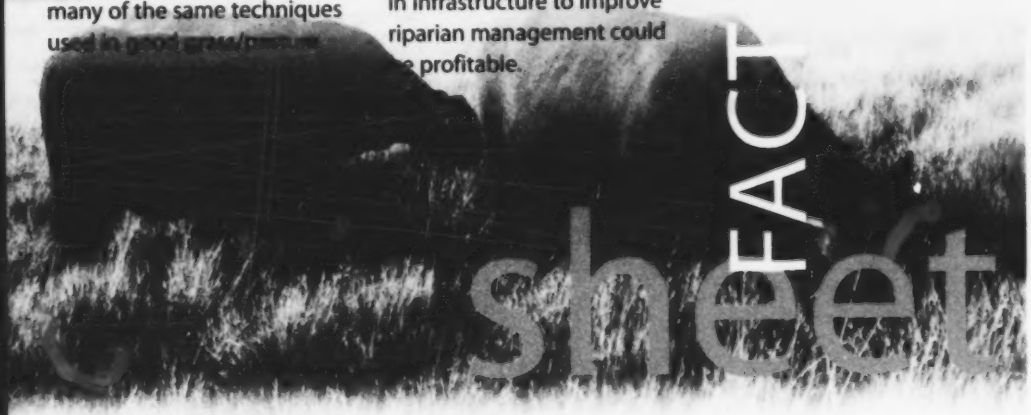

Photo credit: Tracy Harrison

Saskatchewan Watershed Authority

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Photo credit: Tracy Harrison

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Photo credit: Shelanne Wiles

Wetlands are an important grazing resource for members of the Meacham Hills Forage Club.

Is riparian grazing management economical?

Can a cattle operation with all the challenges of today afford to pay special attention to the management of riparian areas? The short answer is YES! Riparian management is important to cattle operations because riparian areas are an extremely important forage resource.

Riparian grazing management fits well into typical good grazing management. Simple practical solutions like rotational grazing, improving distribution or remote watering can be adapted to maintain the health of riparian areas and pay economic dividends. A survey of 346 producers who had changed to controlling riparian area grazing and rotational grazing practices found that 80% reported higher weights gains, 91% reported higher forage production, 88% reported higher forage quality and 52% reported lower over-wintering costs.

Case study: Henry and Bill Seidlitz operate a mixed farm along the Arm River near where it enters Last Mountain Lake. The Seidlitz's implemented a grazing system that protects fish habitat and improves their bottom line. Seeding a spring tame pasture has allowed them to defer grazing along the Arm River until mid-June. By mid-June northern pike have finished using this important spawning area. The river pasture was further fenced into separate paddocks. Each year one paddock is left ungrazed to allow for complete recovery. By deferring grazing until later in the year, native pasture will carry more grazing and condition of the pasture will be maintained. The Seidlitz's have been able to extend their grazing system and reduce winter feeding costs.

Water Quality

Riparian management can also be economically justified by maintaining the quality of water supplies. Riparian management usually involves remote watering or protecting water quality by maintaining riparian health. Recent research has shown that improved water quality can improve feed intake, feed efficiency and weight gains.

Case study: Dick and Diane Coombs, recent transplants from British Columbia, farm in the Wroxton area east of Yorkton. When the Coombs first established their operation, cattle watered from an 80 acre marsh. Soon problems with poor water quality and muddy conditions proved to be a problem. The Coombs installed a solar-powered watering system and constructed a rock and gravel laneway for cattle to cross marshy areas. Real economic advantages were gained by maintaining a good quality watering site.

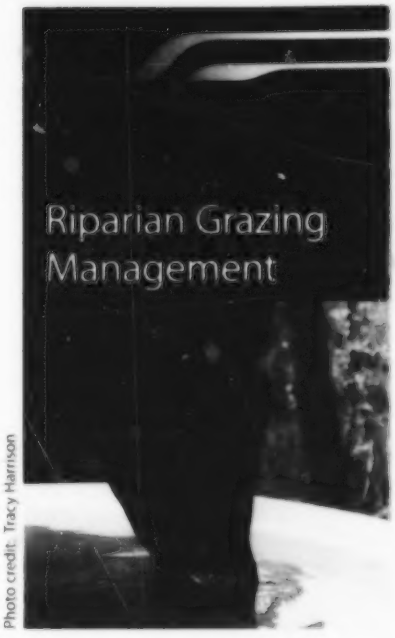
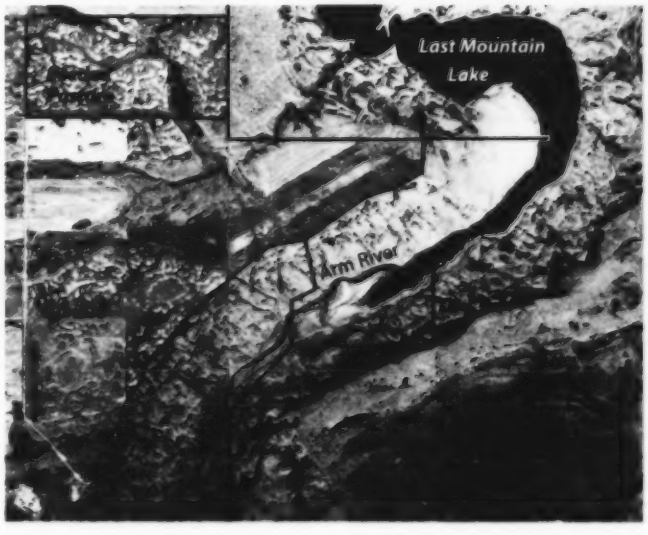


Photo credit: Tracy Harrison

Riparian management means good quality water for cattle.

A grazing system designed to protect fish habitat means profits for the Seidlitz operation.



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Part of the whole ranch plan

Riparian management should be a part of developing a whole ranch plan. Riparian management involves planning for improving or maintaining the condition of vegetation in the entire land base, not only in the riparian areas. Economic benefits are derived from proper management of the entire ranch which includes the cumulative effects of riparian and upland pasture management in addition to livestock management.

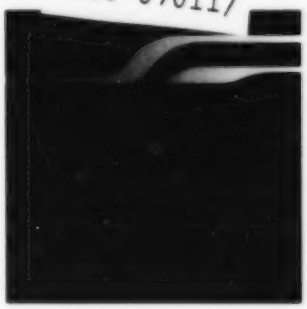
Case Study: Ludger and Armand Poncelet operate the Snowpoint ranch south of Whitewood. Their farmyard overlooks the beautiful Pipestone valley which comprises a large portion of their pasture base. Three miles of valley pasture provides forage for a large number of heifers from May to October each year. The condition of this valley pasture is important to the Poncelets both for maintaining a long term sustainable forage supply and an appealing environment from which to market bred heifers. In 2001 the Poncelets implemented a riparian grazing system. The valley was divided into seven paddocks which allows them options to provide rest to each pasture every year. In this case riparian grazing management fit well into the overall objectives of the Snowpoint operation.

What does it take to implement riparian grazing management?

Most grazing systems can be easily adapted to implement riparian grazing management. The cheapest solution to maintain riparian areas is simply "good management". This means becoming aware of how riparian areas work and training your eye to read what is happening in the pastures. A group of Alberta ranchers were asked about their preferred choices for improving riparian management. Their number one choice was simply to learn more about how these areas work. By focusing on the basics of grazing management (stocking rate, distribution, deferral and rest) producers have a starting point for riparian management.

Case study: The Ranchmasters Management Group is a group of four families that ranch along the Pipestone Creek near Wapella, Saskatchewan. The Pipestone valley is an important grazing resource for members of the club. The club organized a one day pasture school that included learning how to recognize the woody vegetation and stable banks that make a healthy riparian area. This small investment of time gave club members an initial goal to work towards when managing their valley pastures.

Sometimes additional infrastructure is required to manage riparian areas. This usually involves fencing, water development or seeding of additional pasture. The purpose of this additional infrastructure is to allow the manager to control the frequency, utilization and timing of grazing along riparian areas. A study of forty producers who had implemented riparian management projects found that an average cost of $12,000 per mile of stream was required to implement a riparian grazing plan though many projects are implemented for much less. This investment usually involved major pasture improvements such as water site development, new pasture seeding or cross fencing. In any pasture improvement it is important to determine if the benefits of the project will justify the costs. Whether this cost is justified will depend on the individual circumstances of each operation.



Most grazing systems can be easily adapted to implement riparian grazing management.

Riparian management is a key to the overall goals of the Snowpoint operation on the Pipestone Creek.

Photo credit: Etienne Soulodre

Environmental economics of riparian areas

While good riparian management can lead to increased profit for producers, it also produces environmental benefits for society at large. While it is difficult to put a value on the economic value of clean water and wildlife habitat, economists have attempted to put a value on the benefits derived by society from good riparian management. One way to determine the value of an environmental good is to present people with a hypothetical situation and ask what they would be willing to pay for the environmental improvement. A random survey of 300 Saskatchewan households found that the clean water and wildlife habitat provided by good riparian management is worth approximately $21 million to the Saskatchewan public. A second study tried to determine the economic value of good riparian areas by estimating the actual value of improved water quality, improved wildlife habitat, recreation, soil erosion and aesthetics on one operation along one mile of stream. They estimated the total value to society from this one operation to be over $13,000. It is important to note that these numbers are preliminary and based on scant data. However, what these numbers show is that the public has a vested interest in supporting good riparian management by cattle producers.

Other reading

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Summary

Stewardship is where private and public economics meet. Riparian areas are important economically to both cattle producers and society at large. Luckily the economics provide a win-win situation. What is profitable from a cattle production perspective provides the environmental services that society desires. Cattle producers can increase feed efficiency, weight gains and forage production while society receives increased water quality, wildlife habitat and recreation opportunities.

FACT sheet

For Further Information

A bibliography of the resources used to prepare this factsheet is available from the Saskatchewan Watershed Authority. Factsheets on other topics are also available.

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